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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,510	08/16/2005	Antonio Lopez Munoz	MDR-0039	7871

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EXAMINER	
MCCLENDON, SANZA L	
ART UNIT	**PAPER NUMBER**
1711	

MAIL DATE	DELIVERY MODE
07/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/525,510	LOPEZ MUNOZ, ANTONIO	
	Examiner	Art Unit	
	Sanza L. McClendon	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2 & 8/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 19-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear in claim 19, line 5, the range of viscosity range applicant is intending for the ink to be between. Clarification is requested. For examination, the examiner will assume it is between 10 and 30 cps as found in claim 27. In addition, it is unclear at what temperature or temperature range applicant is intending for the defined viscosity. Is it at room temperature, at 50 0C, 30 0C, or 65 0C, etc? Clarification is requested?

Claim Rejections - 35 USC § 102/Claim Rejections - 35 USC § 103

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

The examiner is interpreting the instant claims as a method for producing an ink; the limitation "digital printing" is being interpreted as a future intended use because digital printing is a means for depositing the ink onto a substrate. The claims define a process for making an ink composition, wherein the "digital printing" limitation imparts no distinctive structural characteristics to define it from any other type of ink.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 19-30 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Marshall et al (5,275,646).

Marshall et al teaches a photocurable ink composition. Said ink comprises a colorant and a liquid phase consisting essentially of polymerizable monomers, an optional conductive compound and a photoinitiator and/or sensitizer. The composition is curable by exposure to radiation, such as ultraviolet light. The composition can comprise up to 70%, e.g. 20 to 60%, by weight of a mono-functional monomer, such as isobornyl acrylate among others found in column 3. In order to balance the properties Marshall et al sets froth the addition from up to 70%, preferably from 30 to 50% of di-functional monomers, such as hexandiol acrylates, tripropylene glycol di (meth) acrylates, and others as found in column 3. Additionally, Marshal et al sets forth the use of up to 10% by weight of tri-functional monomers, such as trimethylolpropane tri (meth) acrylate—see column 3. The photoinitiators and photosensitizers can be found in column 4 along with the colorant. Additionally, polymers and prepolymers can be added to increase viscosity and/or increase the crosslink density in the cured ink—see column 5. Marshall et al sets forth in such as way that one of ordinary skill in the art would be able to obtain viscosities as high as up to 50 cps at 25 0C can be obtained or as low as 5 to 6 cps at 25 0C can be obtained depending on the amount of/proportions of reactive monomers added to the composition in the overall teachings of the disclosure—see column 2, column 3, lines 45, column 5, lines 29-64, and column 6, lines 20-21. Therefore, it is deemed Marshall et al encompasses applicant's viscosity range of 10 to 30 cps. Per example 1, Marshall et al teaches preparing a mixture of reactive monomers and photoinitiators. Separately, preparing a mixture comprising a colorant and reactive monomers and prepolymer/polymers to prepare a pigment dispersion and milling the dispersion to a particle size of no greater than 1 micron

and adding the 1st preparation with stirring to obtain a polymerizable ink composition curable by exposure to radiation. Thus the inventions of claims 1-30 are read in the reference. Regarding claim 26, it is deemed obvious in view of the reference since one of ordinary skill in that art would recognize this known polymerization technique is an obvious means of applying radiation to cure a photopolymerizable composition.

6. Claims 27-30 are rejected under 35 U.S.C. 102(3) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Johnson et al (6,593,390).

Johnson et al sets forth a photocurable ink composition. Per examples the inks have a viscosity between 15 and 20 cps at 30 0C. Said inks comprise a colorant having a particles size of not greater than 1 micron and having a narrow size range distribution and a reactive liquid material—see column 3. Said reactive liquid material comprises mono-, di-, and tri-functional acrylic compounds. Said mono-functional acrylic monomers include isobornyl acrylate and can be found in amounts from 20 to 60% by weight—see column 4 and column 6. The di-functional acrylic monomers include hexanediol diacrylate and tripropylene diacrylate and can be found in amounts from 10 to 35% by weight—see column 3 and column 6. Said tri-functional acrylic monomers include trimethylolpropane triacrylate and can be found in amounts from above 10 to 30% by weight—see column 4 and column 6. Johnson et al sets forth the bi- and tri-functional monomers are used to balance the properties of the ink and together read on the ratio as found in claim 27. Photoinitiators, photosensitizers and other additive can be added to the composition—see columns 7-8. Per example 1, Johnson et al teaches milling the pigment in an organic hyperdispersant, which reads on the organic medium of claim 27 as written, and filtering to a particle size of 1 micron and then forming a homogeneous mixture by blending with stirring the reactive liquid phase to produce an ink having a viscosity from 15 to 20 cps. Said inks are curable by exposure to radiation, such as ultraviolet light. Regarding claim 26, it is deemed obvious in view of the reference since one of ordinary skill in that art would recognize this known polymerization technique is an obvious means of applying radiation to cure a photopolymerizable composition. Therefore the inventions of claims 1-30 are read in the reference.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 2001/0029867 to Hayashi et al sets forth a radiation curable ink composition comprising a colorant, acrylic oligomers and mono-, di-, and tri-functional acrylic monomers with a photoinitiator and other customary additive having a viscosity from 2 to 13.0 Pa*s useful for stencil printing. Hayashi et al discloses using digital printers in the examples but while teaching dispersing the colorant in the reactive monomers and milling, kneading or compounding, fails to disclose the colorant particle sizes. US

7,015,257 (2004/0110862) to Hayashi et al sets forth a similar ink composition however teaches milling to a particles size of 500 nm.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L. McClendon whose telephone number is (571) 272-1074. The examiner can normally be reached on Monday through Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sanza L. McClendon
Examiner
Art Unit 1711

7/28/06

SMc